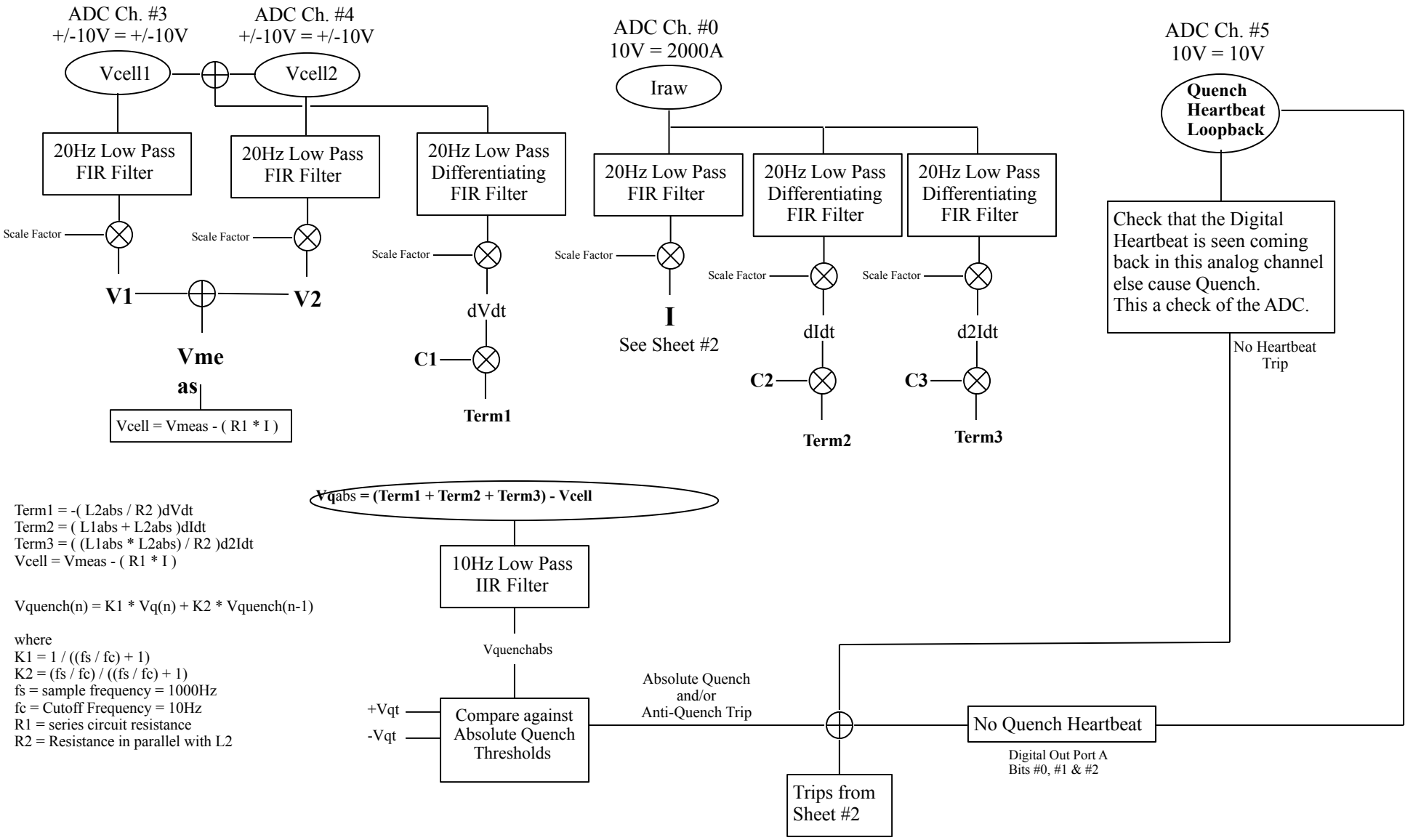
uQPM Quench Algorithm

KSM
03/07/2006



Term1 = -(L2abs / R2)dVdt
Term2 = (L1abs + L2abs)dIdt
Term3 = ((L1abs * L2abs) / R2)d2Idt
Vcell = Vmeas - (R1 * I)

Vquench(n) = K1 * Vq(n) + K2 * Vquench(n-1)

where
K1 = 1 / ((fs / fc) + 1)
K2 = (fs / fc) / ((fs / fc) + 1)
fs = sample frequency = 1000Hz
fc = Cutoff Frequency = 10Hz
R1 = series circuit resistance
R2 = Resistance in parallel with L2

NOTES:
The analog input ranges shown are for the TEL2 Main Solenoid system. The analog input ranges vary from system to system.
This algorithm is executed at 1000Hz.

uQPM Quench Algorithm

KSM
03/07/2006